

REMARKS

The Application has been carefully reviewed in light of the Office Action dated July 10, 2003 (Paper No. 19). Claims 1 to 35 are in the application, of which Claims 1, 8, 15, 22 and 29, the independent claims, are being amended herein. Reconsideration and further examination are respectfully requested.

By the Office Action, Claims 1, 3, 5 to 8, 10, 12 to 15, 17, 19 to 22, 24 and 26 to 30 have been rejected under 35 U.S.C. § 102(e) over U.S. Patent 5,721,572 (Wan '572), Claims 2, 9, 16 and 23 have been rejected under 35 U.S.C. § 103(a) over Wan '572 and U.S. Patent 5,553,199 (Spaulding), and Claims 4, 11, 18 and 25 have been rejected under 35 U.S.C. § 103(a) over Wan '572 and U.S. Patent 5,625,378 (Wan '378). Reconsideration and withdrawal of the rejections are respectfully requested.

It is stated in the Office Action, at page 4, that the limitation of interpolating grid points of the cell located by performing a binary search of the forward model look-up table (LUT) was not claimed. Independent Claims 1, 8, 15, 22 and 29 are being amended herein. However, Applicant respectfully points out that the limitation was present in the claims without the need for an amendment, since the cell whose grid points are used in interpolation has antecedent basis with, and refers to, the cell located in the binary search. Notwithstanding this and to remove any ambiguity that may have been present, the independent claims have been amended to positively identify the cell used in the interpolation as the cell located in a binary search of the forward model LUT.

It is stated in the Office Action, at page 4, that Wan '572 (at col. 8, lines 24 to 49) discloses the above-identified feature of the claims. As is discussed in more detail

below, this position is believed to be erroneous, since is not supported by the description found in Wan '572.

Initially, Applicant wishes to point out that Wan '572 has been carefully reviewed, and no mention of a binary table search has been found in Wan '572. Further, a careful review of Wan '572, and in particular lines 24 to 49 of col. 8 of Wan '572, has found no mention of a binary search of a forward model LUT, or any other table for that matter.

Col. 8, lines 24 to 49 of Wan '572 is seen to describe the process of generating a gamut boundary descriptor table. In generating the gamut boundary descriptor table, Wan '572 is understood to first read a forward model LUT, and then to create a gamut boundary triangle table, Table I. (See col. 7, lines 1 to 10 of Wan '572.) Nothing in the description of reading the forward model LUT is seen to disclose a binary search of a forward model LUT.

Wan '572 is then seen to describe (at col. 8, lines 47 to 49, and Figure 13, the description of which commences at col. 8, line 61) creating the gamut boundary triangle table, Table I, which is also not seen to involve a binary search of a forward model LUT. More particularly and at col. 8, lines 61 to 63, Wan '572 describes stepping sequentially through the squares of the forward model LUT to select a square, and then dividing the selected square into two triangles. Stepping sequentially through squares in the forward LUT to select a square and then dividing the square into two triangles is clearly not the same as searching a forward model LUT by conducting a binary search of the LUT. In addition, the "sequential search" described by Wan '572 is performed to find a square that

needs to be divided, which clearly does not disclose locating a cell of a forward model LUT that contains a device independent target color.

The remainder of the cited portion of Wan '572 is seen to process the triangles in Table I to create Table II, the gamut descriptor table. More particularly, a triangle is selected from Table I, and a point, y , enclosed by the convex hull defined by the selected triangle's three vertices (i.e., y_1 , y_2 , y_3 of Table I) is computed, such that point y is in the plane of the triangle's three vertices. (See Figure 4 and col. 5, line 31 to col. 6, line 21 of Wan '572.) Then, the computed point y , which is in device independent space, is used to calculate a point x , which is a point in device dependent space that corresponds to point y . (See Figure 5 and col. 5, line 46 to col. 6, line 21 of Wan '572.) Nothing in Wan '572's description of creating Table II is seen to involve a binary search of a LUT, let alone a binary search of a forward model LUT.

Accordingly and since nothing in Wan '572, and in particular no portion thereof cited by the Office Action, is seen to in any way disclose or even to suggest a binary search of a forward model LUT, the position taken in the Office Action that Wan '572 describes interpolating grid points of a cell in a forward model LUT located by a binary search of the forward model LUT is believed to be in error. Nothing in Wan '572 is seen to in any way disclose or even to suggest interpolating entries from a forward model LUT at grid points that define a cell located by the binary search of the forward model LUT, so as to obtain device dependent colors corresponding to the device independent color.

Therefore, for at least the foregoing reasons, Claim 1, 8, 15, 22 and 29 are believed to be patentable over Wan '572. Accordingly, reconsideration and withdrawal of the rejection of these claims are respectfully requested.

The remaining claims are each dependent from the independent claims discussed above and are therefore believed patentable for the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

In this regard, the art applied to one or more of the dependent claims, i.e., Spaulding and Wan '378, has been carefully reviewed and is not seen to remedy the above-noted deficiencies of Wan '572.

In view of the foregoing, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,


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